

New Records of Tephritidae (Diptera) from Santa Cruz Island, California

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Abstract.—Published records for five species of Tephritidae from Santa Cruz Island are reviewed. Nineteen species and nine genera of Tephritidae are newly reported from this island. Six new host-plant-species rearing records are included in these distribution data.

During annual or biannual visits to Santa Cruz Island, Santa Barbara Co., California, in conjunction with our continuing, long-standing evaluation of biological control of prickly pear cacti by means of sequential photography (Goeden et al., 1967; Goeden and Ricker, 1981), I have collected the Tephritidae recorded herein. Heretofore, only the following species were recorded from this large, coastal island: *Tomoplagia cressoni* Aczél in Foote and Blanc (1963); *Paroxyna genalis* (Thomson) in Novak (1974) and Goeden and Blanc (1986); *Tephritis californica* Doane, *Tephritis araneosa* (Coquillett), and *P. americana* Hering in Goeden and Benjamin (1985).

The following new island records are listed alphabetically and include only those of my collections involving the greatest number of flies reared or swept of each species. Voucher specimens of each species reported are stored in my collection of California Tephritidae at the University of California, Riverside, and are marked with a bright yellow place-label to allow ready location as suggested by Miller and Menke (1981). Their entomological bibliography of the California Islands partly inspired this study. The plant nomenclature follows Munz (1974); the insect nomenclature, mostly Foote and Blanc (1963) and Stoltzfus (1977).

Aciurina thoracica Curran, 2 ♂ and 1 ♀ swept from riparian shrubs near Cascada in east, central valley, 15 IV 1983.

Dioxyna picciola (Bigot), 1 ♂ and 2 ♀ swept from unidentified annual herbs in wash, Cervada Canyon, 1 X 1981.

Euaresta bullans (Wiedemann), 2 ♂ and 2 ♀ swept from the introduced weed, *Xanthium spinosum* L. (Hilgendorf and Goeden, 1983), mouth of Laguna Canyon, 30 IX 1981.

Euarestoides acutangulus (Thomson), 6 ♂ and 8 ♀ reared from a quantity of flower heads of *Ambrosia chamissonis* Lessing collected at Christy Beach, 8 X 1985.

Euarestoides arnaudi Foote, 1 ♂ and 2 ♀ reared from a quantity of flower heads of *Baccharis pilularis* deCandolle ssp. *consanguinea* (deCandolle) C. B. Wolf collected in central valley, 11 X 1983.

Neaspilota sp., 1 ♀ reared from a quantity of flower heads of *Haplopappus venetus* (Humboldt) Blake ssp. *vernonioides* (Nuttall) Hall at Stanton Ranch airport, 13 X 1983.

Tephritis baccharis (Coquillett), 5 ♂ and 5 ♀ reared from stem galls on *Baccharis glutinosa* Persoon collected in Cebada Canyon, 8 X 1985.

Tephritis stigmatica (Coquillett), 3 ♂ and 2 ♀ reared from mature flower heads of *Senecio douglasii* deCandolle collected in central valley, 9 X 1985.

Trupanea californica Malloch, 25 ♂ and 25 ♀ reared from flower heads of *Gnaphalium microcephalum* Nuttall collected in central valley, 7 X 1985.

Trupanea femoralis (Thomson), 2 ♀ reared from quantity of flower heads of *Haplopappus squarrosus* Hooker and Arnott ssp. *grindeloides* (deCandolle) Keck collected in central valley, 21 X 1983.

Trupanea maculigera Foote, 1 ♀ swept from *B. glutinosa* in central valley, 21 X 1981.

Trupanea nigricornis (Coquillett), 8 ♂ and 10 ♀ reared from same flower heads of *H. venetus* ssp. *vernonioides* collected at Stanton Ranch airport on, 13 X 1983.

Trupanea radifera (Coquillett), 4 ♂ and 2 ♀ reared from flower heads of *Heterotheca grandiflora* Nuttall collected atop west end of South Ridge just east of pine forest, 8 X 1985.

Trupanea signata Foote, 1 ♂ swept from *B. pilularis* ssp. *consanguinea* on South Ridge, 12 X 1983.

Trupanea wheeleri Curran, 27 ♂ and 28 ♀ collected from flower heads of *H. squarrosus* ssp. *grindeloides* collected atop South Ridge just east of pine forest, 7 X 1985.

Urophora formosa (Coquillett), 23 ♂ and 24 ♀ reared from same flower heads of *H. venetus* ssp. *vernonioides* collected at Stanton Ranch airport, 13 X 1986.

The above rearing records also represent new host-plant species records for *Euarestoides arnaudi*, *Trupanea californica*, *T. femoralis*, *T. nigricornis*, *T. radifera*, and *T. wheeleri* (Wasbauer, 1972; Goeden, 1983, 1985). In addition, my collection houses 4 ♂ and 6 ♀ of *Euaresta bellula* Snow swept at Christy Beach, 23–26 IV 1976 by J. D. Pinto. And, F. L. Blanc, Calif. Dept. of Food and Agric. (Ret.) kindly furnished me with new Santa Cruz Island records for *Chetostoma californicum* Blanc, 1 ♀ on *Pinus muricata* D. Don (a non-host), Canada de la Cuesta, 5 III 1969, and *Euaresta stigmatica* Coquillett, 1 ♀ from the central valley, 26 IX 1978, both collected by J. A. Powell.

All tephritid species reported also occur on the California mainland (Foote and Blanc, 1963; Novak, 1974). Interestingly, I consider *Trupanea nigricornis* the most widespread and common tephritid in interior parts of southern California. In coastal areas it is replaced largely by another generalist, *Trupanea wheeleri*. Yet, the former species also occurs in the central valley of Santa Cruz Island, a topographic feature unique among all the California islands. Also, I sampled mature flower heads of *Brickellia californica* (Torrey and Gray) Gray in the central valley in 1981, 1983, and 1985, which on the southern California mainland commonly yield *Procecidochares flavipes* Aldrich. This fly never was reared from island samples, although it apparently is restricted to the genus *Brickellia* (unpubl. data). This finding, my negative sweep records, and other rearings from island and mainland Asteraceae suggest that *Procecidochares* may be absent from the island.

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